IN THE CLAIMS:

Please cancel Claims 1-13 and 33-25 without prejudice.

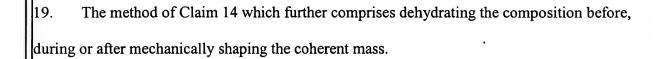
Please examine Claims 14-32 and 36-40 as follows:

14. A method of forming an osteogenic osteoimplant having not greater than about 32% void volume, the method comprising:

providing a coherent mass of bone particles optionally in combination with one or more biocompatible components, the coherent mass formed at least in part from elongate bone-derived elements optionally in combination with bone powder; and,

mechanically shaping the coherent mass of bone particles to form the osteogenic osteoimplant.

- 15. The method of Claim 14 wherein the bone particles are obtained from cortical, cancellous and corticocancellous bone of autogenous, allogenic, xenogenic and transgenic origin.
- 16. The method of Claim 14 wherein the biocompatible component is selected from the group consisting of biocompatible fluid carrier, biocompatible binder, filler, fiber, mesh, substance providing radiopacity, plasticizer, biostatic/biocidal agent, surface active agent, and bioactive substance.
- 17. The method of Claim 14 which further comprises applying heat to the composition before, during or after mechanically shaping the coherent mass.
- 18. The method of Claim 14 which further comprises cross-linking bone particles within the composition before, during or after mechanically shaping the coherent mass.



- 20. The method of Claim 17 which further comprises dehydrating the heated, mechanically shaped coherent mass after applying the heat.
- 21. The method of Claim 14 wherein the step of mechanically shaping comprises pressing, extruding and/or rolling.
- 22. The method of Claim 21 further comprising means for the application of lateral force.
- 23. The method of Claim 22 wherein a compressive and lateral force is applied simultaneously.
- 24. The method of Claim 14 further comprising the step of placing the coherent mass between two flexible stick-resistant surfaces prior to the step of mechanically shaping.
- 25. The method of Claim 14 further comprising the step of placing the coherent mass of bone-derived particles on an inflexible, impermeable, horizontally planar work surface prior to the step of mechanically shaping.



- 27. The method of Claim 26 wherein at least one of the revolving cylindrical roller is modified to provide for the surface treatment of one or both surfaces of the osteoimplant.
- 28. The method of Claim 14 further comprising the step of:

 occluding a portion of the surface area of the osteoimplant to provide at least one zone of impermeability to soft tissue ingrowth wherein said zone is integral with the osteoimplant.
- 29. The method of Claim 28 wherein the occluding step comprises heating a portion of the surface area at elevated temperature.
- 30. The method of Claim 28 wherein the occluding step comprises crosslinking bone particles at a portion of the surface area of the mechanically shaped mass.
- 31. The method of Claim 14 further comprising the step of shaping the osteoimplant to a determined form, configuration and/or three-dimensional architecture.
- 32. The method of Claim 14 further comprising the step of layering and fastening the osteoimplant to form a laminate material.
- 36. An osteoimplant prepared by the method of claim 14.
- 37. An osteoimplant prepared by the method of claim 17.